

COVID-19 AND LONG-TERM CARE

A CASE STUDY OF ON AND BC

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KEY POINTS – WAVE I

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- Many more residents living in Ontario long-term care homes have died from coronavirus disease 2019 (COVID-19) than in British Columbia.
- Before the pandemic, the long-term care system in British Columbia exhibited a number of potential strengths relevant to pandemic preparedness compared with Ontario: there was better coordination between long-term care, public health and hospitals; greater funding of long-term care; more care hours for residents; fewer shared rooms; more nonprofit facility ownership; and more comprehensive inspections.
- During the first wave of the pandemic, British Columbia was faster than Ontario in responding to COVID-19, with actions to address public health support, staffing, and infection prevention and control.
- Leaders in British Columbia were more decisive, coordinated and consistent in their overall communication and response.

COVID-19 IN ON AND BC

Table 1: Coronavirus disease 2019 cases and deaths among residents in long-term care facilities in Ontario and British Columbia (2020)

	Ontario*	BC†
No. of facility outbreaks (current and resolved)	436	72
Cumulative no. of resident cases	5965	466
Resident infection rate, %	7.6	1.7
Cumulative no. of resident deaths	1817	156
Resident mortality rate, %	2.3	0.6
Resident case fatality rate, %	30.5	33.5

*Data up to Sept. 10, 2020, from Public Health Ontario (includes only long-term care homes).

†Data up to Sept. 10, 2020, from BC Centre for Disease Control (includes acute care, long-term care and independent living facilities).

	ON	BC
Number of LTCHs	626	294
Number of Beds	~79,000	~27,000

WHAT WAS KNOWN BACK IN MARCH 2020?

- COVID-19 case fatality increases significantly with age (Wu et al., 2020; *JAMA Internal Medicine*; Wu et al., 2020; *JAMA*)
- Transmission between long-term care facilities and high resident mortality noted early in Washington state (McMichael et al., 2020; *New England Journal of Medicine*)
- Long-term care facilities are especially vulnerable to respiratory disease outbreaks (Strausbaugh et al., 2003; *Clinical Infectious Diseases*)

Wu, C., Chen, X., Cai, Y., Zhou, X., Xu, S., Huang, H., ... & Song, J. (2020). Risk factors associated with acute respiratory distress syndrome and death in patients with coronavirus disease 2019 pneumonia in Wuhan, China. *JAMA internal medicine*.

Wu, Z., & McGoogan, J. M. (2020). Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention. *Jama*, 323(13), 1239-1242.

McMichael, T. M., Currie, D. W., Clark, S., Pogosjans, S., Kay, M., Schwartz, N. G., ... & Ferro, J. (2020). Epidemiology of Covid-19 in a long-term care facility in King County, Washington. *New England Journal of Medicine*, 382(21), 2005-2011.

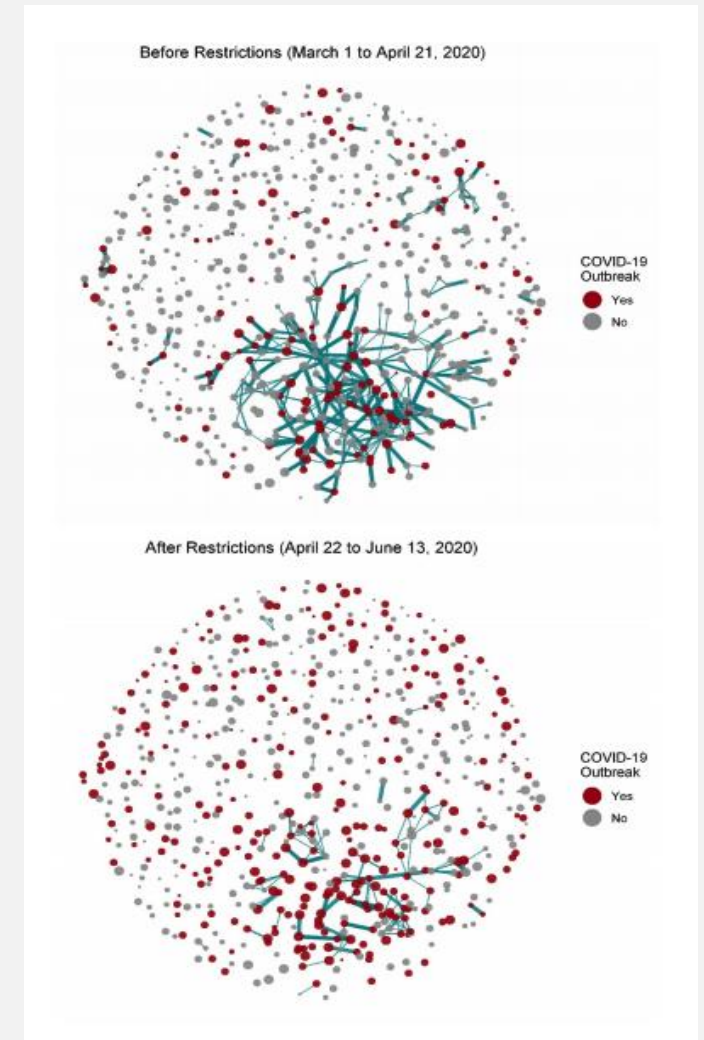
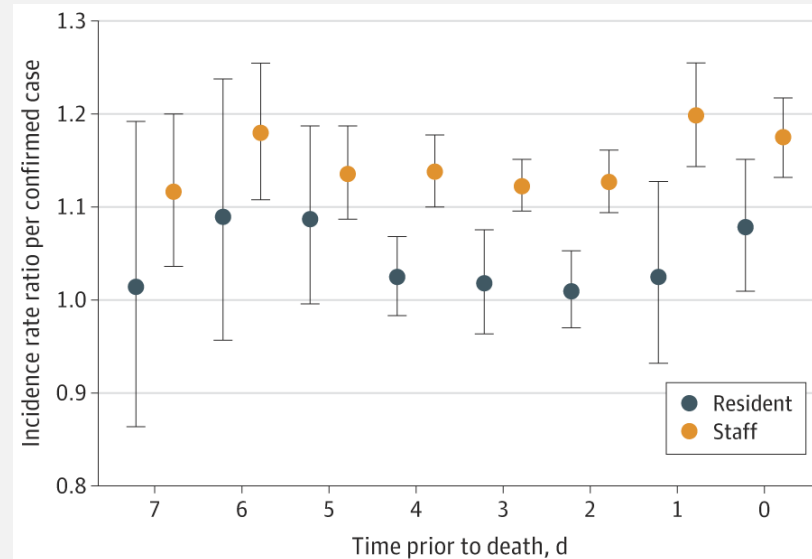
Strausbaugh, L. J., Sukumar, S. R., Joseph, C. L., & High, K. P. (2003). Infectious disease outbreaks in nursing homes: an appreciated hazard for frail elderly persons. *Clinical infectious diseases*, 36(7), 870-876.

FIRST WAVE RESPONSES

	ON	BC
First Confirmed COVID-19 Case	Jan 25	Jan 27
Single-Site Work Restrictions	April 14	March 26
SWAT Team Support	April 15	March 7
Outbreak Definition	April 15	March 18
Universal Masking	April 8	March 25
Visitor Restrictions	March 13	March 16

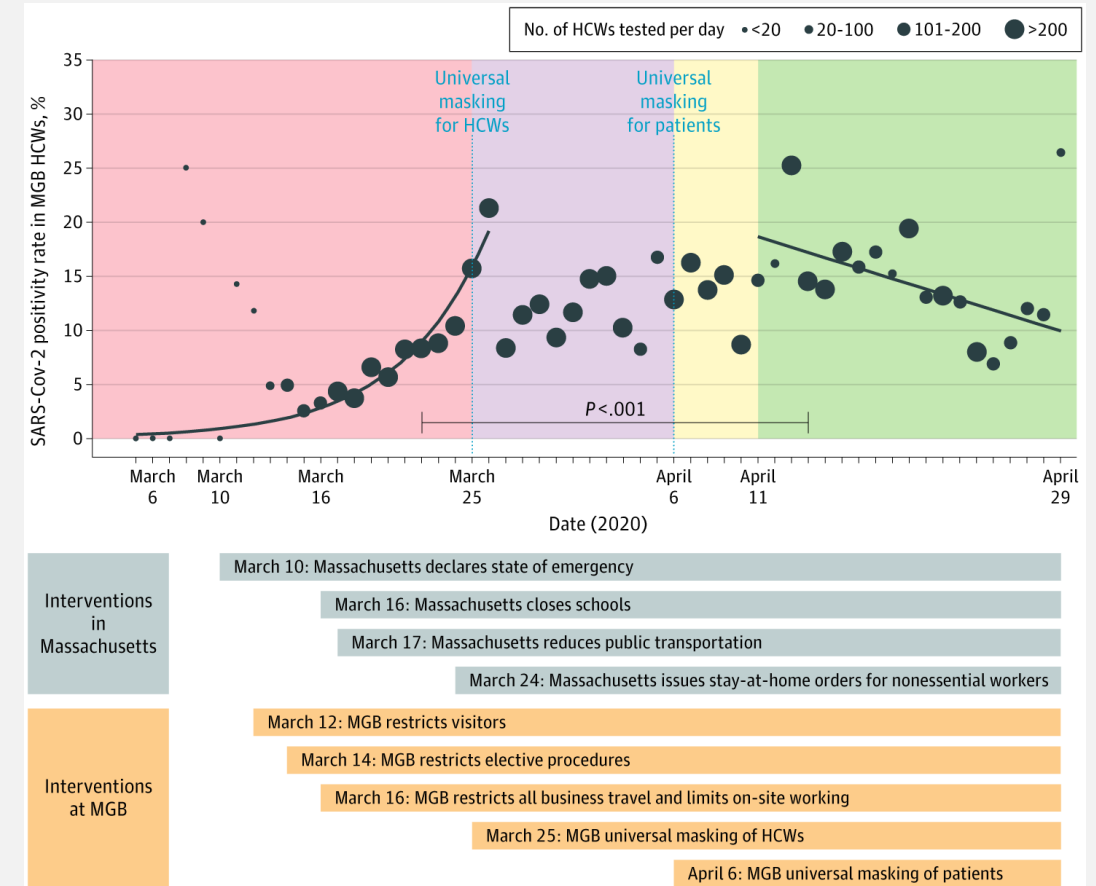
SINGLE-SITE WORK RESTRICTION

- Staff are the main vectors of SARS-CoV-2 in LTCHs (Chow et al., 2020; *JAMA*)
- Staff infection preceded resident infection and death (Fisman et al., *JAMA Network Open*)
- Single-site work restriction policy in Ontario reduced number of LTCHs with a “connection” to another LTCH (Jones et al., 2020; *medRxiv*)



UNIVERSAL MASKING

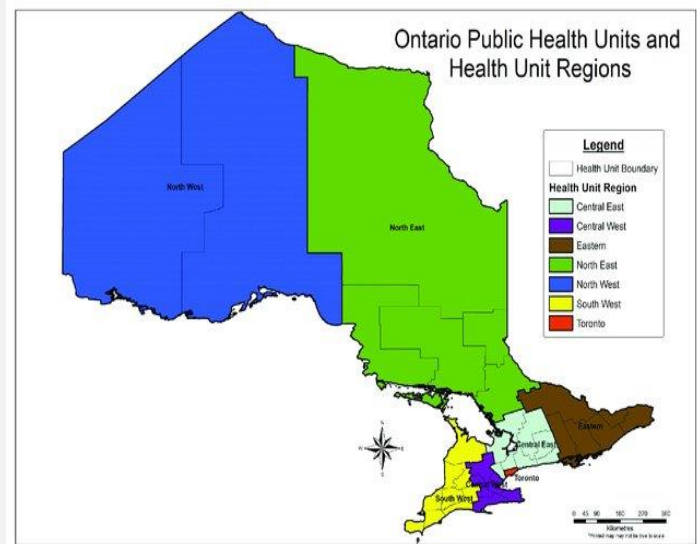
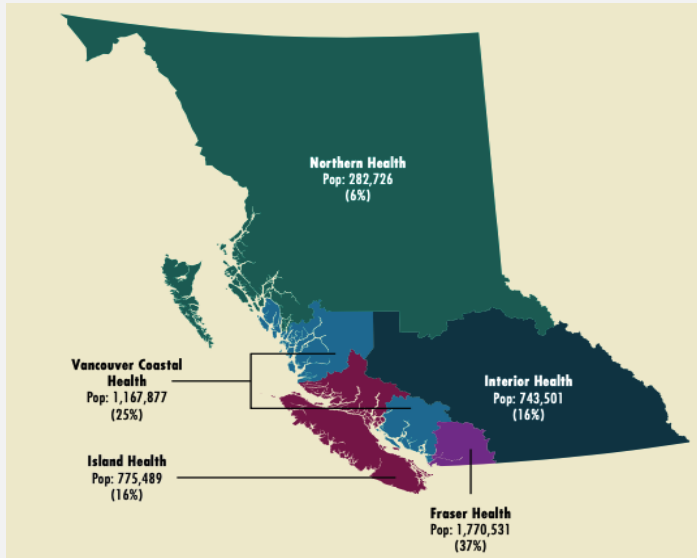
- BC incorporated universal masking in LTCHs into guidelines on March 25 – citing guidelines from Australia and New Zealand about droplet precautions (Brewster et al., 2020; *Medical Journal of Australia*)
- Ontario did not implement a universal masking policy until April 8th.
- Several studies – although not perfect – have found strong associations between universal masking and lower SARS-CoV-2 positivity at local and community levels (Wang et al., 2020; *JAMA*; Lyu & Wehby, 2020; *Health Affairs*).



PANDEMIC PREPAREDNESS PRIOR TO WAVE I

	ON	BC
Shared Rooms*	63% of Residents	24% of Residents
Business Models	58% For-Profit 26% Non-Profit 16% Municipal	34% For-Profit 28% Non-Profit 38% Municipal
Inspection Policies	Reactive	Annual
Average Direct Care Hours Worked	2.71	3.25
Health System Organization	In Flux and Less Integrated	Stable and More Integrated

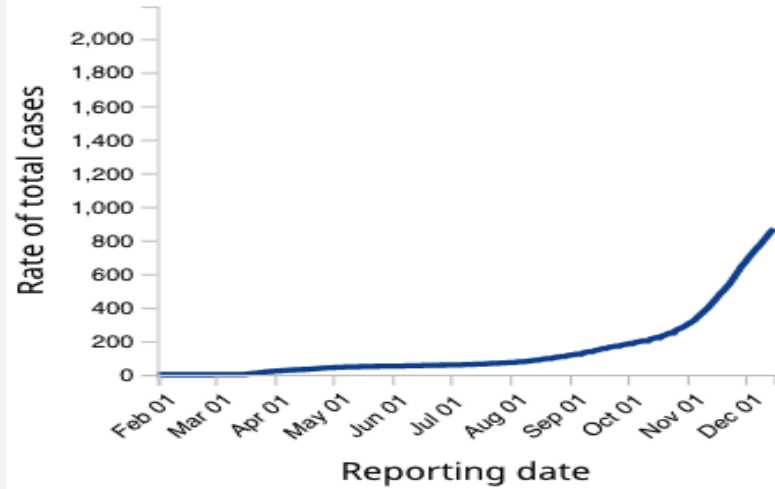
HEALTH SYSTEM ORGANIZATION



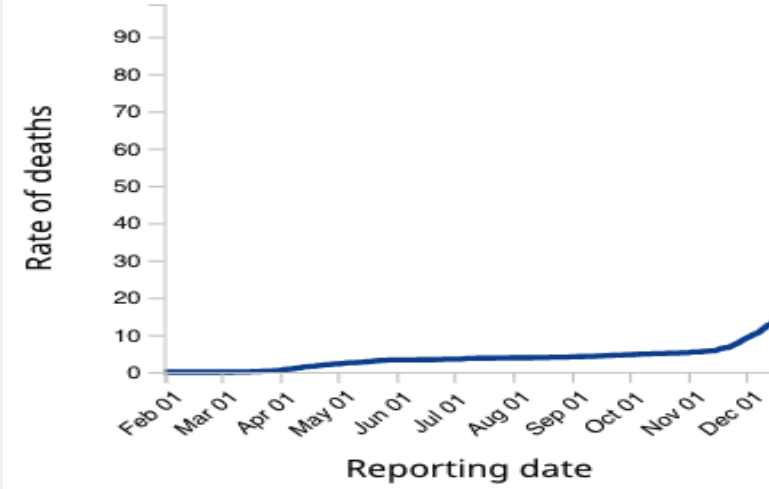
- BC has 5 Regional Health Authorities – with direct oversight of hospitals and public health and indirect oversight of long-term care (mobilize greater and earlier support of LTCHs)
- Public health (34 public health units), long-term care, and acute care are much less integrated in Ontario
 - Ontario was undergoing a period of transition from 14 LHINs to 5 Ontario Health regions (directly affecting acute care and long-term care)
- Poor coordination between public health and the rest of the Ontario health system was previously identified during the 2003 SARS Outbreak – reinforced again by the Auditor General of Ontario
- Ontario experienced an exodus of senior leaders within regional and provincial health system organizations. These organizations also experienced substantial cuts in budgets prior to the pandemic

COVID-19 IN THE GENERAL POPULATION (PER 100,000 PEOPLE)

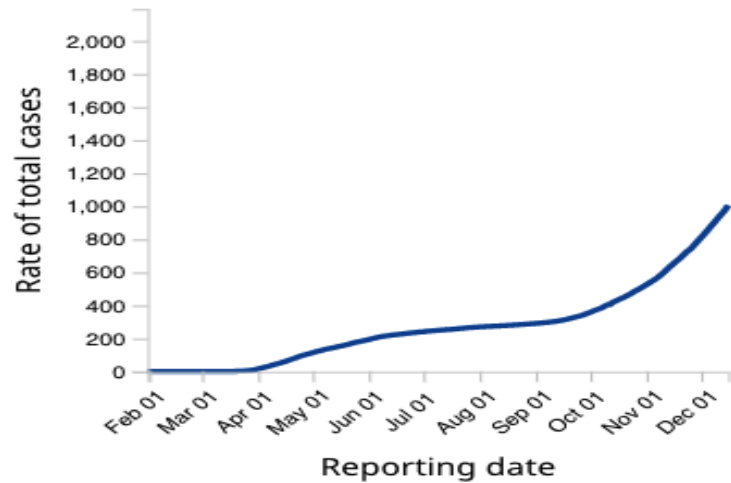
British Columbia



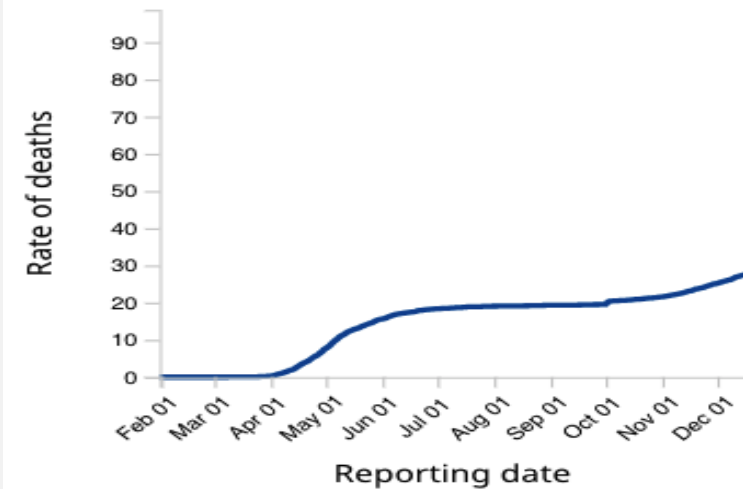
British Columbia



Ontario



Ontario



SECOND WAVE DATA

	Sept 10 (BC)	Sept 10 (ON)	Dec 5 (BC)	Dec 5 (ON)	Sept 10 – Dec 5 Absolute Difference (BC)	Sept 10 – Dec 5 Absolute Difference (ON)
All Cases	6,830	43,855	36,779	125,385	29,949	81,530
All Case Rate (% of Population)	0.14%	0.30%	0.72%	0.86%	0.59%	0.56%
LTC Resident Cases	466	5,965	1,741	8,895	1,275	2,930
LTC Resident Deaths	156	1,817	398	2,378	242	561
Resident Infection Rate (% of Beds)	1.7%	7.6%	6.5%	11.3%	4.8%	3.7%
Resident Mortality Rate (% of Beds)	0.6%	2.3%	1.5%	3.0%	0.9%	0.7%

SECOND WAVE – SOME REASONS WHY ON AND BC HAD
COMPARABLE LONG-TERM CARE MORTALITY RATES

1. Broadly speaking, both provinces now have similar approaches in long-term care in terms of PPE, IPAC support, etc.
2. Ontario now tests long-term care staff and volunteers to a greater extent than in BC. It is possible that this offsets some of the structural advantages that BC has.
3. High levels of community transmission has overwhelmed preparedness in long-term care in both provinces.

FURTHER RECOMMENDATIONS

- Offer more economic security and support to staff within LTCHs, particularly care aides and personal support workers
- Formalization of structures and processes to ensure more integration between public health, long-term care and acute care in Ontario
- More transparency surrounding staffing levels and hours of direct care in long-term care homes to facilitate management and research
- Phasing out of shared rooms in LTCHs and upgrading of homes with “older” design standards
- Recognizing that high levels of community transmission overwhelm LTC-specific prevention and response efforts, efforts to minimize community transmission may be the best way to protect long-term care residents
- Learnings in LTC should be applied to other common continuing care settings such as supportive or assisted living facilities (with considerations of unique issues faced by residents, staff, and caregivers in each setting)

THANK YOU – QUESTIONS?